

Overview

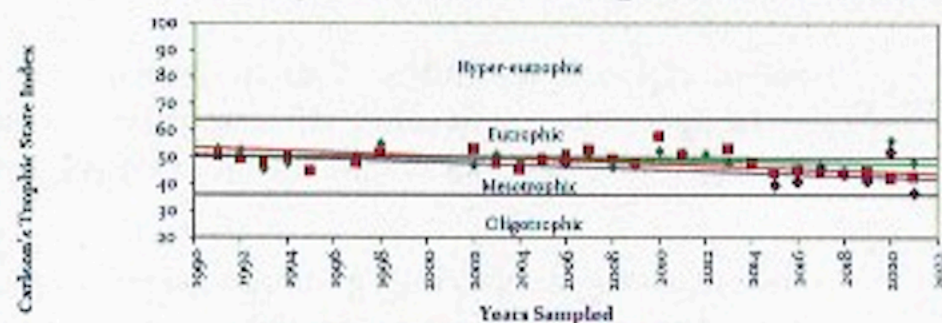
Enemy Swim Lake overall has been trending from a eutrophic state to the mesotrophic state, meaning increasing in water quality, reducing nutrient loadings in the lake from non-point source pollution, effectively storing nutrients in the lake bed, and increasing water clarity. These results are due to the watershed land use, as shown in Figure 4. Approximately 48% of the land is considered protected. Land use is shown to be approximately 71% grassland, 5% cropland, 2% developed and 21% water/wetlands, according to past watershed project reports and RMB Labs 2020 Water Quality Report.

Looking to the Future

Although the lake shows overall good water quality, it is vital that improvements and protection continues within the watershed, along and on the lake. These practices include improved grazing practices, buffers along streams and the lake, wetland restorations, and cropland conservation practices such as no-till, crop rotation, and cover crops.

Along with protection within the watershed and on the lake itself aquatic invasive species will also play a role in the water quality of Enemy Swim. Zebra mussels were discovered in Enemy Swim Lake in the summer of 2022. With zebra mussels now living in the lake, they will play a role within the overall food chain and biology of the lake. Curly leaf pondweed, although not currently found in Enemy Swim, is established in local nearby lakes and is cause for threat to Enemy Swim. Practicing of washing and drying of boats, watercraft, and other recreation equipment, and not transporting water from other waterbodies is vital to protect Enemy Swim Lake from other aquatic invasive species.

Enemy Swim Lake Trophic State Index



- Average Summer TSI Based on Secchi Disk (Meters)
- Average Summer TSI Based on Phosphorus
- Average Summer TSI Based on Chlorophyll
- Linear (Average Summer TSI Based on Secchi Disk (Meters))
- Linear (Average Summer TSI Based on Phosphorus)
- Linear (Average Summer TSI Based on Chlorophyll)

Figure 2. Enemy Swim Lake Trophic State Index 1991-2021

TSI	Attributes	Fisheries & Recreation
<30	Oligotrophy: Clear water, oxygen throughout the year in the bottom of the lake, deep cold water.	Trout fisheries dominate.
33-43	Bathymetry becomes more important.	Trout fisheries in deep lakes only. Walleye, Chub present.
43-53	Mesotrophy: Water moderately clear most of the summer. May be "green" in late summer.	No oxygen at the bottom of the lake results in loss of trout. Walleye only predominates.
53-63	Eutrophy: Algae and aquatic plant problems possible. "Green" water most of the year.	Warm-water fisheries only. Bass may dominate.
63-70	Disagreement among agencies, algal blooms and aquatic plant problems.	Unsettled algae and aquatic plants. Low water clarity may discourage swimming and boating.
70-80	Hypereutrophy: Dense algae and aquatic plants.	Water is unsuitable for recreation.
>80	Algal blooms, few aquatic plants.	Rough fish caught dominate in summer fish kills possible.

Figure 3. Eutrophication Scale

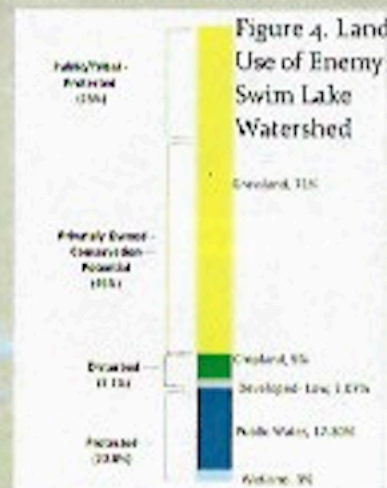


Figure 4. Land Use of Enemy Swim Lake Watershed



Figure 5. Curly-leaf pondweed